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EXAMINER	
YODER III, CHRISS S	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/510,856	HIGUCHI ET AL.	
	Examiner	Art Unit	
	Chriss S. Yoder, III	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-8,13-21 and 25-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-8,13-21 and 25-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 6-8, 13-21, and 25-31 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 6-8, 13-18, 20, 21, and 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (US Patent # 4,598,243) in view of Patino (US Patent # 5,684,387) and in further view of Lee (US Patent # 6,157,169).

2. In regard to claim 6, note Kawakami discloses the use of a video camera that is powered by a battery pack (column 1, lines 27-30) comprising an obtaining means for obtaining a capacity value of a battery (column 2, lines 20-36; column7, lines 14-31; and column 8, lines 56-58; by identifying the battery, the device is obtaining the capacity of the battery using known information of applicable batteries), a setting means for setting a correction value based on the capacity value (column 2, lines 25-32; and figure 2: 100, 102, E1, and E2; in this case the capacity value is obtained from known information of applicable batteries, and based on the type of battery, the correction

value is set), a correcting means for correcting a low power warning voltage value using the correction value (column 2, lines 25-35; and figure 2: E1, E2; the reference voltage is adjusted), and a generating means for generating a warning signal when a detected battery voltage is less than or equal to the corrected low power warning voltage value (column 2, lines 25-27).

Therefore, it can be seen that Kawakami fails to disclose that the capacity value is obtained by communicating via a communications line with a battery pack that contains the battery the capacity value indicating a number of cell structures in the battery, generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value, and a display means for displaying the low power warning or the residual power indication.

Patino discloses that the capacity value is obtained by communicating via a communications line with a battery pack that contains the battery the capacity value indicating a number of cell structures in the battery (column 3, lines 18-23). Patino teaches that the use of a communication to transmit information about the battery is preferred in order for a device to adjust itself to various batteries regardless of the number of cells (column 4, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to include the use of a communication line to communicate the capacity value to the camera as suggested by Patino.

Lee discloses generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value (column 7, lines

10-19, and column 8, lines 34-38), and a display means for displaying the low power warning or the residual power indication (column 9, lines 23-26). Lee teaches that generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value, and a display means for displaying the low power warning or the residual power indication are preferred in order to provide the user with accurate and easy recognition of the remaining battery capacity and available operating time (column 9, lines 36-39). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to generate a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value and to display the low power warning or the residual power indication as suggested by Lee.

3. In regard to claim 7, note Kawakami discloses the use of a detecting means for detecting the battery voltage (column 2, lines 21-23).

4. In regard to claim 8, note Patino discloses a storage means for storing the capacity value (column 3, lines 18-23; and figure 3: 302), said obtaining means obtaining the capacity value from said storage means (column 3, lines 21-23; Lee does disclose the use of an obtaining means 308 which reads the memory, this obtaining means is used to replace the obtaining means of Kawakami in order to collect the data from the storage means in the battery).

5. In regard to claim 13, note Kawakami discloses that the correcting means subtracts the correction value from the low power warning voltage value (figure 2: E1 and E2; E2 is considered to be the equivalent of the low power warning voltage value,

and the difference between E1 and E2 is the correction value which is subtracted from the low power warning voltage; in comparison, applicants figure 6, Vp1 is considered the equivalent of E2, and Vp2 is considered the equivalent of E1).

6. In regard to claim 14, note Lee discloses the determination of residual power amount of the battery based on capacity values (column 7, lines 10-19, and column 8, lines 34-38).

7. In regard to claim 15, note Lee discloses the display of the residual power amount as the residual power indication when the voltage is greater than the warning voltage (column 9, lines 23-26, and figure 11).

8. In regard to claim 16, note Kawakami discloses that the generating means generates the low power warning when the detected battery voltage is greater than a minimum operating voltage (column 3, line 66– column 4, line 10).

9. In regard to claim 17, note Kawakami discloses the use of a video camera (column 1, lines 29-30; this would inherently include a video camera body) and battery pack including a battery having at least one battery cell (figure 3: 210; a battery casing), an obtaining means for obtaining a capacity value of a battery (column 2, lines 20-36; column7, lines 14-31; and column 8, lines 56-58; by identifying the battery, the device is obtaining the capacity of the battery using known information of applicable batteries, and is located in the video camera), a setting means for setting a correction value based on the capacity value (column 2, lines 25-32; and figure 2: 100, 102, E1, and E2; in this case the capacity value is obtained from known information of applicable batteries, and based on the type of battery, the correction value is set), a correcting

means for correcting a low power warning voltage value using the correction value (column 2, lines 25-35; and figure 2: E1, E2; the reference voltage is adjusted), and a generating means for generating a warning signal when a detected battery voltage is less than or equal to the corrected low power warning voltage value (column 2, lines 25-27).

Therefore, it can be seen that Kawakami fails to disclose that the capacity value is obtained by communicating via a communications line with a battery pack that contains the battery the capacity value indicating a number of cell structures in the battery, generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value, and a display means for displaying the low power warning or the residual power indication.

Patino discloses that the capacity value is obtained by communicating via a communications line with a battery pack that contains the battery the capacity value indicating a number of cell structures in the battery (column 3, lines 18-23). Patino teaches that the use of a communication to transmit information about the battery is preferred in order for a device to adjust itself to various batteries regardless of the number of cells (column 4, lines 10-15). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to include the use of a communication line to communicate the capacity value to the camera as suggested by Patino.

Lee discloses generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value (column 7, lines

10-19, and column 8, lines 34-38), and a display means for displaying the low power warning or the residual power indication (column 9, lines 23-26). Lee teaches that generating a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value, and a display means for displaying the low power warning or the residual power indication are preferred in order to provide the user with accurate and easy recognition of the remaining battery capacity and available operating time (column 9, lines 36-39). Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to generate a residual power indication when the detected battery voltage is greater than the corrected low power warning voltage value and to display the low power warning or the residual power indication as suggested by Lee.

10. In regard to claim 18, note Patino discloses a storage means for storing the capacity value (column 3, lines 18-23; and figure 3: 302), said obtaining means obtaining the capacity value from said storage means (column 3, lines 21-23; Lee does disclose the use of an obtaining means 308 which reads the memory, this obtaining means is used to replace the obtaining means of Kawakami in order to collect the data from the storage means in the battery).

11. In regard to claims 20, 21, and 25-28, these are method claims, corresponding to the apparatus of claims 6, 8, and 13-16, respectively. Therefore, claims 20, 21, and 25-28 have been analyzed and rejected as previously discussed with respect claims 6, 8, and 13-16.

12. In regard to claim 29, note Kawakami discloses the correction value being a first value when the capacity value exceeds a first predetermined value that is the capacity value of a battery having a first known number of cell structures and sets the correction value to a second value when the capacity value does not exceed the first predetermined value (figure 2: it sets the values E1 and E2 dependent upon whether the capacity value exceeds Ea; if the capacity value exceeds Ea then the correction value is set to be E1, otherwise, the correction value is set to E2; the first known number of battery cells is known, as can be seen in figures 4A-4B: 10a has only one cell, and 10b has four cells). Kawakami does not explicitly disclose that the correction value is set to the second value when the capacity exceeds a second predetermined value and that it is set to zero when the capacity doesn't exceed the second predetermined value. However, the Kawakami reference does disclose that instead of two batteries used in figure 2 (100 and 102) there can be a plurality of battery types used (column 20, lines 20-21). Because the graph only shows the use of two batteries, if three different batteries were used instead of two, it would be implied that there would be a second predetermined value in order to calculate the correction value in order to compensate for the difference in time until the low battery waning is generated for each battery. As for the correction value being set to zero, this is merely a reference point as to where there is no correction for the time difference (this would be implied to be any point where the device is set to be the primary warning time). For example, if E2 was established as the reference point for zero, then E1 would be a normal correction value equivalent to the "first value" and "second value" as described by applicant. Kawakami

teaches that the use of a plurality of types of batteries can be used in order to extend the life of the device and to adjust the price of the device dependent on the price of batteries. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to set the correction value to the second value when the capacity exceeds a second predetermined value and sets the correction value to zero when the capacity doesn't exceed the second predetermined value in order to include the use of a plurality of types of batteries.

13. In regard to claim 30, note Kawakami discloses the correction value being a first value when the capacity value exceeds a first predetermined value that is the capacity value of a battery having a first known number of cell structures and sets the correction value to a second value when the capacity value does not exceed the first predetermined value (figure 2: it sets the values E1 and E2 dependent upon whether the capacity value exceeds Ea; if the capacity value exceeds Ea then the correction value is set to be E1, otherwise, the correction value is set to E2; the first known number of battery cells is known, as can be seen in figures 4A-4B: 10a has only one cell, and 10b has four cells). Kawakami does not explicitly disclose that the correction value is set to the second value when the capacity exceeds a second predetermined value and that it is set to zero when the capacity doesn't exceed the second predetermined value. However, the Kawakami reference does disclose that instead of two batteries used in figure 2 (100 and 102) there can be a plurality of battery types used (column 20, lines 20-21). Because the graph only shows the use of two batteries, if three different batteries were used instead of two, it would be implied that there would

be a second predetermined value in order to calculate the correction value in order to compensate for the difference.in time until the low battery waning is generated for each battery. As for the correction value being set to zero, this is merely a reference point as to where there is no correction for the time difference (this would be implied to be any point where the device is set to be the primary warning time). For example, if E2 was established as the reference point for zero, then E1 would be a normal correction value equivalent to the "first value" and "second value" as described by applicant. Kawakami teaches that the use of a plurality of types of batteries can be used in order to extend the life of the device and to adjust the price of the device dependent on the price of batteries. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Kawakami device to set the correction value to the second value when the capacity exceeds a second predetermined value and sets the correction value to zero when the capacity doesn't exceed the second predetermined value in order to include the use of a plurality of types of batteries.

14. In regard to claim 31, this is a method claim, corresponding to the apparatus of claim 29. Therefore, claim 31 has been analyzed and rejected as previously discussed with respect claim 29.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami (US Patent # 4,598,243) in view of Patino (US Patent # 5,684,387) in further view of Lee (US Patent # 6,157,169) and in further view of "Smart Battery Data Specification".

16. In regard to claim 19, note the primary reference of Kawakami in view of Patino and Lee discloses a video system as claimed in claim 17. Therefore, it can be seen that the primary reference of Kawakami in view of Patino and Lee fails to disclose the use of a battery having a detecting means in the battery pack that detects the battery voltage. "Smart Battery Data Specification" discloses the use of a battery having a detecting means in the battery pack that detects the battery voltage (chapter 5; and page 24: 5.1.10). The "Smart Battery Data Specification" teaches that the use of a battery having a detecting means in the battery pack that detects the battery voltage is preferred in order to help enable intelligent, adaptive power management systems. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary reference of Kawakami in view of Patino and Lee to include the use of a battery having a detecting means in the battery pack that detects the battery voltage as suggested by "Smart Battery Data Specification".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (571) 272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CSY
November 10, 2005

NGOC-YEN VU
PRIMARY EXAMINER